

What Is Claimed Is:

1 *Sub A* 1. A method for spatially compositing digital video images with a tile
2 pattern library, comprising the steps of:
3 (b) choosing a tile pattern from the tile pattern library;
4 (c) creating a compositing window within a display area of a
5 compositor, wherein a shape of said created compositing window matches a shape
6 of a periphery of said chosen tile pattern and wherein said created compositing
7 window is formed by pixels within the display area;
8 (d) decomposing said created compositing window into a
9 number of tiles, wherein the number of tiles equals the amount of tiles in said
10 chosen tile pattern, wherein a shape and a position of each of the tiles matches a
11 shape and a position of a corresponding tile in said chosen tile pattern, and
12 wherein each of the tiles is formed by pixels within the display area;
13 (e) assigning each of the tiles to a corresponding digital video
14 display unit; and
15 (f) receiving, at each of the tiles, an image output of said
16 assigned corresponding digital video display unit, thereby spatially compositing
17 digital video images with a tile pattern library.

1 *Sub C* 2. The method of claim 1, further comprising beforehand the step of:
2 (a) counting digital video display units whose image outputs
3 will be spatially composited by the compositor such that said counted digital video
4 display units determines a maximum for the amount of tiles in said chosen tile
5 pattern.

1 3. The method of claim 2, wherein steps (a) to (f) are performed for
2 each frame in a dynamic sequence of frames of digital video images.

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1 13. The method of claim 12, wherein said communicating step
2 comprises obtaining, from the tile pattern library, an index code that identifies said
3 chosen tile pattern, wherein the index code minimizes the amount of data needed
4 to convey the parameters that define the compositing window and the parameters
5 that define each of the tiles.

1 14. A system for spatially compositing digital video images with a tile
2 pattern library, comprising:

3 (a) a tile pattern chooser to choose a tile pattern from the tile
4 pattern library;

5 (b) a compositing window creator to create a compositing
6 window to reside within a display area of the compositor, wherein a shape of the
7 compositing window created by said compositing window creator matches a shape
8 of a periphery of the tile pattern chosen by said tile pattern chooser and wherein
9 the compositing window created by said compositing window creator is formed
10 by pixels within the display area;

11 (c) a decomposer to decompose the compositing window
12 created by said compositing window creator into a number of tiles, wherein the
13 number of tiles equals the amount of tiles in the tile pattern chosen by said tile
14 chooser, wherein a shape and a position of each of the tiles matches a shape and
15 a position of a corresponding tile in said chosen tile pattern, and wherein each of
16 the tiles is formed by pixels within the display area;

17 (d) a tile assigner to assign each of the tiles to a corresponding
18 digital video display unit; and

19 (e) an image transmitter to transmit, to each of the tiles within
20 the display area of the compositor, an image output of the corresponding digital
21 video display unit assigned by said tile assigner, thereby spatially compositing
22 digital video images with a tile pattern library.

1 15. The system of claim 14, further comprising a counter to count
2 digital video display units whose image outputs will be spatially composited by the
3 compositor such that the digital video display units counted by said counter
4 determines a maximum for the amount of tiles in the tile pattern chosen by said tile
5 pattern chooser.

1 16. The system of claim 15, wherein said system is a tile compositing
2 controller.

1 17. The system of claim 15, further comprising a communications
2 medium to communicate, to the compositor, the parameters that define the
3 compositing window and the parameters that define each of the tiles.

1 18. The system of claim 17, wherein said communications medium
2 meets Digital Visual Interface specifications.

1 19. The system of claim 18, wherein said communications medium is
2 a Transitional Minimized Differential Signal data link.

1 20. The system of claim 19, wherein said communications medium is
2 within a frame of digital video images.

1 21. The system of claim 18, wherein said communications medium is
2 an Inter Integrated Circuit bus.

1 22. The system of claim 17, wherein said communications medium
2 minimizes an amount of data needed to convey the parameters that define the
3 compositing window and the parameters that define each of the tiles.

1 23. The system of claim 22, wherein said communications medium
2 comprises an index code obtainer to obtain, from the tile pattern library, an index
3 code that identifies the tile pattern chosen by said tile pattern chooser, wherein the
4 index code minimizes the amount of data needed to convey the parameters that
5 define the compositing window and the parameters that define each of the tiles.

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